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ABSTRACT

Making every school in America free of drugs and violence and fostering a disciplined environment conducive to learning by the year 2000 is the aim of the sixth National Education Goal. Schools are far from this goal as violence, drugs, and discipline problems continue to disrupt learning. This report examines several aspects of schools and classrooms, their relationship to the community, and their effect on achieving disciplined schools free of drugs and violence. Subjects concerning problems in the classroom are curricula and instructional techniques for preventing drug use and violence. Also, organization and management for establishing and maintaining order in the classroom are addressed. Several areas are covered under the topic of schools: student population, school climate, school goals emphasized, leadership and decision making, policy and rule procedure and enforcement, student-grouping practices, and specialized roles and programs such as alternative schools. Also covered are school-community relationship issues including coordinated drug-use prevention and violence-reduction activities, as well as federal, state, and district education policies on drug use and discipline. The Goal Six objectives aim for implementation of firm and fair school drug policies, comprehensive K-12 drug-prevention programs, and community involvement in making schools safe and drug-free. (Contains 174 references.) (JPT)

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Review of Research on Ways To Attain

GOAL SIX

Creating Safe, Disciplined, and Drug-free Schools*

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I. INTRODUCTION

The sixth National Education Goal states: "By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning." While drug and alcohol use have declined in recent years, the current situation in many of our schools is still far from this goal.

Studies reveal the following profile:

- Seventy percent of public school students and 52% of private school students have reported that drugs are available at their school (Bastian & Taylor, 1991).
- Nearly 13 percent of eighth-graders, 23 percent of tenth-graders and 30 percent of twelfth-graders had five or more drinks in a row in a two-week period during the 1990-91 school year (Johnston, Bachman & O'Malley, 1992).
- At least 71 persons were killed with guns at schools in the period 1986-90 (Smith, 1990).
- Nationwide, 44 percent of teachers reported in 1991 that student misbehavior interfered substantially with their teaching (Mansfield, Alexander & Farris, 1991).

Yet, studies of effective schools have shown repeatedly that both safety and order are essential before learning can occur in schools (Bossert, 1985). How then can order in schools be established?

Drug use, violence or discipline problems confront students and school staffs to some extent every day in almost all schools. How to minimize this is a major challenge across the nation. The findings of research can help point the way by identifying effective strategies. Research may also show that certain strategies are ineffective, while others have not been systematically examined, or studied at all. This report provides such an analysis.

In this paper the term drugs will include alcohol and tobacco as well as marijuana and other narcotics since the professional health community and the Education Department consider each as drugs. Alcohol and tobacco may not be purchased legally by minors, are addictive, and their continued use poses long-term health risks. The term drug-free schools will include drug-free students

since being "under the influence" can affect one's ability to concentrate in school and do homework. Violence is defined as threats or actual bodily harm. A "disciplined environment conducive to learning" is the third major part of Goal Six. Disciplined educational environments are organized to maximize student development and engagement with learning while also minimizing disruptions.

Goal Six covers three distinct problem areas, each with unique challenges. A disciplined environment conducive to learning must be provided by all schools. The other two, drugs and violence, are problems of society and schools alike. In several large studies adolescent drug use is correlated with school misbehavior, dropping out, delinquency and teenage pregnancy (Hawkins, Catalano & Miller, 1992). Early aggressiveness and distractibility predict later drug use and delinquency (Hawkins, Catalano & Miller, 1992). In general, early delinquency leads to illicit drug use, and vice versa (OSAP, 1989). Violence often plays a role in drug transactions and getting money to pay for drugs. Drug dealers have actively recruited youths to deal and deliver drugs. Those who drink are more likely to have car accidents and personal altercations. The easy access to guns and their increasing use to settle turf battles and personal disputes are now commonplace.

It is not surprising then that these problems spill over from affected communities into the school. Children who commonly see violence and drug use around them may bring these same ways of handling conflicts and personal problems into the school.

Drug use and violence are also linked by their origins, and can be encouraged or discouraged by various characteristics of the person, family, community, and school. Studies suggest that adolescent delinquents and drug users have common roots including similar personality characteristics (Jessor & Jessor, 1977) and bonds with delinquent peers (Elliott, Huizinga & Menard, 1989), perhaps the most powerful influence. A high level of family conflict, rather than divorce itself, increases drug use and delinquency, as does the lack of parent-child attachments (Hawkins, Catalano & Miller, 1992). Some of the risk factors--characteristics of groups of children which increase the chances of deviant behavior--include poverty, ineffective schools, and crime-ridden neighborhoods. Protective factors in

the person or environment against such risks include effective parenting, connections to competent adults, and personal skills in various areas.

Among the various settings for child development, schools have an important mission to educate and prepare all children for a productive life regardless of their social circumstances. Schools impart knowledge and skills, transmit values, and help youth establish challenging life goals and strive for success in order to reach their life goals. With that role in mind, this report examines several aspects of schools and classrooms, their relationship to the community, and their effect on achieving Goal Six. The following topics are considered:

Classrooms:

1. Curricula and instructional techniques for preventing drug use and violence.
2. Organization and management for establishing and maintaining order.

Schools:

1. Number of students in each school.
2. School climate or culture, which is the beliefs, values and attitudes of staff and students regarding schools and learning.
3. Goals emphasized, such as academic achievement or control of students.
4. Persons and issues involved in leadership and decision making.
5. Establishing procedures and enforcing policies and rules.
6. Student grouping practices - e.g. tracking.
7. Specialized roles and programs such as alternative schools.

School-community relationships:

1. School-community connections, e.g coordinated drug use prevention and violence reduction activities.
2. Federal, state and district education policies on drug use and discipline.

It should be clear that antisocial behavior may be influenced by characteristics of the person, the teacher and classroom, the school and community. Efforts to reduce antisocial behavior need to focus on these multiple sources of the problem (see Gottfredson, Gottfredson & Hybl, 1990).

Finally, the three objectives under Goal Six aim for implementation of firm and fair school drug policies, comprehensive K-12 drug prevention education programs in schools, and community support for making schools safe and drug-free. In response to federal regulations, most schools have certified that they have developed drug policies and comprehensive K-12 drug education and prevention programs. We recognize that schools and school districts may also choose additional strategies to attain Goal Six. This report examines many types of strategies.

II. BACKGROUND

In this section the three Goal Six topics are treated in terms of the specific nature and extent of the problem. Because of its overarching importance, the topic of disciplined environments is discussed first followed by drugs and violence.

Disciplined School Environments

A "disciplined environment conducive to learning" moves beyond misbehaving individuals to focus on schools and classrooms organized to maximize intellectual and personal development, increase engagement in academic work, and minimize disruptions. Thus a disciplined environment may refer to specific discipline policies and practices in the school or classroom as well as general organization characteristics and the social climate of schools. A disciplined environment should ultimately help more students graduate from high school, the aim of Goal Two.

A disciplined environment may be manifested by students and teachers engaged in their work as well as by structured and stimulating learning situations. Tardiness, absence and class cutting

indicate less student involvement with learning, and almost 40% of teachers see these as major problems, moreso in cities and secondary schools (Mansfield, Alexander & Farris, 1991). Fourteen percent of principals consider the lack of teacher involvement or absenteeism as a major problem at their school, again moreso in cities and secondary schools than elsewhere (Mansfield & Farris, 1992). Moreover, 44 percent of teachers nationwide reported that student misbehavior interfered substantially with their teaching. Earlier, 29% reported that they had seriously considered leaving teaching because of student misbehavior (Ashwick, 1987).

On the positive side, large proportions of eighth graders nationally state that teachers are interested in students (75%), really listen (68%), praise effort (63%) and teach well (80%). Thus for most students teachers are seen as working hard to provide a disciplined classroom environment. Responses were similar for boys and girls and across most racial and ethnic groups, but fewer low achieving and often-absent students agreed with these statements (Hafner et al., 1990). These latter students would appear more alienated and in need of special efforts to engage them in learning. Thus, solutions must be sensitive to the kinds of students in need and the larger social context. No single best strategy is likely to emerge.

Drugs and Schools

Within the last two decades, it has become evident that tobacco, alcohol, and other drug use is a serious problem for many pre-adolescents as well as adolescents. Though important regional, racial and economic differences exist regarding use preference, drug use affects all segments of our population. Tobacco is included as a drug in this report due to its addictive nature, its long-term health risks, and the inclination of some young smokers to then try other drugs.

For many youth, initial use can lead to prolonged problems such as poor school performance, school misbehavior, truancy, dropout, delinquency, teenage pregnancy, and suicide. (Jessor & Jessor,

1977). Kandel (1982) found that if youngsters use alcohol or any other drug more than a few times, continuation would more likely occur throughout a significant part of their lives.

More importantly, tobacco, alcohol, and marijuana are identified as gateway drugs to other illicit drugs among our youth. This means that people who use drugs such as cocaine or heroin almost always begin by using one or more of the gateway drugs (Kandel, 1978). According to Hansen (unpublished data) inhalants should now be added as a gateway drug. Inhalant use is actually higher during adolescence and then decreases as youth grow older.

Adolescence is a time of great psychological and physiological change, and this is when experimentation with drugs (and participation in other risk behaviors) is likely to occur. As noted by Kandel, the younger children are when they first start using gateway drugs, the more likely they are to go on to try other drugs such as marijuana and crack and to progress from casual use to regular use, and from regular use to abuse in response to the presence of other risk factors, including the probability of involvement in deviant activities such as crime and selling drugs. According to Robins and Przybeck, young people who initiate drug use before the age of 15 are at twice the risk of having drug problems than those who wait until after age 19 (Hawkins, Catalano & Miller, 1992).

According to the Office of Substance Abuse Prevention (OSAP) research has shown that ages 10-16 are the ages when alcohol and drug use attitudes and beliefs are being formed and when alcohol and other drug use is initiated. Since the onset of alcohol and other drug use is primarily from the ages of 12 to 20, with 15 as the peak age for initiation, prevention efforts are strongly encouraged during the elementary and pre-teen years (OSAP, Monograph #1, 1989). According to a study conducted by Ellickson and Hays (1991), three-fourths of the sample students had tried alcohol by the middle of 7th grade. They suggest that onset may be delayed by targeting alcohol prevention at children in grade 6 or earlier.

Use of Gateway Drugs

The lastest Monitoring the Future Survey report provides reliable and consistent trend data on alcohol and other drug use of 12th graders for the last 15 years (Johnston, Bachman & O'Malley, 1992). The 1991 Survey included for the first time national data on use by younger students and by youth who have dropped out of school. The following data show use of the "gateway drugs"--alcohol, tobacco and marijuana--by 8th, 10th, and 12th graders (Johnston, Bachman & O'Malley, 1992).

Many younger students have already tried alcohol--54 percent of 8th graders, 72 percent of 10th graders, and 78 percent of 12th graders--in the past year. Of even more concern was the rate of binge drinking. Nearly 13 percent of 8th graders and 23 percent of 10th graders had drunk 5 or more drinks in a row (defined as binge drinking) in a two-week period. Fewer high school seniors reported recent occasions of binge drinking during the previous two weeks -- 30 percent in 1991 compared to a peak of 41 percent in 1983.

Fourteen percent of 8th graders, 21 percent of 10th graders, and 28 percent of 12th graders smoked cigarettes during the previous 30 days, while 3.1 percent of 8th graders and 6.5 percent of 10th graders already smoked half a pack or more on a daily basis.

Fewer students had tried marijuana (compared to alcohol and cigarettes) in the previous 30 days--3.2 percent and 8.7 percent of 8th and 10th graders, respectively. Current use of marijuana (defined as use in the previous 30 days) for seniors declined from a peak of 37 percent in 1979 to 14 percent in 1991.

Bachman and O'Malley (1990) explain that the declines in drug use in previous years, in particular marijuana and cocaine, were due to the increased perceived harmfulness of drugs, and the norms among peers that are intolerant of drug use. However, despite overall reductions in illegal drug use among seniors, their use level is still high. Use in the lower grades is also a major concern and indicates much work is still needed in the area of drug prevention across all grades.

Availability of Drugs At or Near School

A 1989 U.S. Bureau of Justice Statistics Study (Bastian & Taylor, 1991) of students ages 12 through 19 assessed the availability of drugs at school. Seventy percent of public school students and 52 percent of private school students have reported drugs are available at their school. Approximately 68 percent of high school students and approximately 60 percent of elementary school students believed that drugs were easily obtainable on their campuses. Specifically:

- Thirty-one percent of students indicated that they could obtain alcohol nearby or on school property.
- Thirty percent of students said marijuana was easy to obtain at or near school.
- Eleven percent of students said it was easy to obtain cocaine at or near school.
- Nine percent of students reported crack was easy to obtain at or near school.

In 1985, principals reported that an average of two students per 1,000 were caught selling illegal drugs at school. More were caught selling drugs in urban schools (5 per 1,000 students) than in rural schools (1 per 1,000); but the rate was the same for junior and senior high schools, and did not differ by the size of the schools (Ashwick, 1986). While efforts have been under way for over 20 years to prevent drug problems from occurring at all, research clearly indicates that more attention must now be given to the elementary years. In conclusion, early intervention is essential for protecting youth from acquiring harmful habits. It would also alleviate the enormous cost of drug use to education.

Poor school performance, misbehavior, truancy, dropping out, delinquency, teenage pregnancy, and suicide are all associated with drug use, and impact the delivery of educational services. Thus educators in public and private elementary and secondary schools, whose primary responsibility should

be the education of our youth, must instead spend an inordinate amount of their time and resources dealing with the many consequences and correlates of student drug use, especially alcohol.

Violence in Schools

Violence in schools is a shocking but rather uncommon event. For example, in a 1991 national survey only 2% of teachers reported being physically attacked and 8% threatened with injury in the previous 12 months. Serious discipline problems are more common. Nineteen percent of the teachers reported being verbally abused by a student from their school in the previous four weeks--a serious discipline problem but not a violent act as the term is used here. Physical conflicts among students was seen as a serious or moderate problem by 28% of the teachers (Mansfield, Alexander & Farris, 1991).

Accounts from adolescent students of being victims of violent acts in schools vary widely and the method of collecting information is probably a factor in these disparities. Four-to-six month rates range from 2% assaulted based on a household survey of 12-19 year olds (Bastian & Taylor, 1991) to 23% of eighth graders who had fought with another student based on school questionnaires (Hafner et al., 1990) although it is often hard to say who started fights and therefore who is the original assailant. Fear for personal safety in schools was a concern for 12-16% of students in these two studies with blacks and American Indians being twice as likely as whites to report not feeling safe at school (Hafner et al., 1990).

Some antisocial behavior is fairly common among youth such as "exploratory" rebellious behavior. But a small proportion of students may be responsible for a large part of disciplinary referrals. For officially-recorded crimes, over half are committed by only 6-7 percent of persons (Shannon, 1982; Wolfgang, Figlio & Sellin, 1972). Repeated antisocial behaviors among pre-adolescents such as fighting and being disruptive are strongly associated with later delinquency. Studies following students from the earliest grades show that teacher ratings of classroom disturbance,

disrespect and impatience predict well different kinds of misbehavior and psychological problems in adolescence (Block & Block, 1982; Kellam & Brown, 1982).

Misbehavior in school is affected by risk factors in the student and the environment. Males outnumber females three to one (Kazdin, 1987). Misbehaving youths display less academic competence, limited career goals, dislike of school, more delinquent friends, and less belief in school rules than their more conforming peers (Gottfredson, 1987; Hirschi, 1969). They also demonstrate poor interpersonal and problem-solving skills, lack of deference to authority, and aggression. Peers often reject them (Kazdin, 1987).

Adolescents from lower socio-economic status (SES) families commit more serious assaultive offenses in the community than youth from higher SES levels. Family factors strongly related to serious offenses include lack of parental supervision, indifference, rejection, and criminal behavior of parents. Contrary to common perceptions, divorce and separation by themselves play only a small part (Office of Technology Assessment, 1991).

Violence also needs to be seen in relation to the community. Schools in neighborhoods with higher crime rates and fighting gangs have more violence as outside problems spill over into the school (NIE, 1978). In the above household study of teenage students 15% reported street gangs at their schools. Of these students 28% said there were fights between gang members at school at least once a month. More Hispanic (32%) than black (20%) than white students (14%) indicated the presence of gangs in their schools (Bastian & Taylor, 1991).

The problem is not just in families and communities. From a large national study which helped launch the investigation of crime in schools, those schools with more male students, larger enrollments, larger classes, and junior highs (vs. senior highs) had more violence, as did those schools lacking strict and fair administration of discipline. And when students felt their classes did not teach them what they wanted to learn, did not consider grades important or plan to go to college, and felt they could not influence their own lives, more school violence also occurred (NIE, 1978).

More disorder also occurs when teachers think students should be punished severely for misbehavior, staff cannot agree on how to handle misbehavior or ignore it, resources for teaching are lacking, and rules are seen as unfair and not firmly enforced more disorder occurs--even when schools similar in urban location, racial composition, socioeconomic status, and neighborhood crime are compared (Gottfredson & Gottfredson, 1985). Thus personal, family, community, school and classroom factors all play a part in violence occurring in schools. Efforts to reduce discipline problems and violence in schools need to consider these multiple sources of the problem (Gottfredson, Gottfredson & Hybl, 1990).

III. RESEARCH ON HOW TO MEET THE GOAL

We now turn to research on how to meet Goal Six through school-based programs and practices that address the unacceptable level of youth drug use and violence. Since a disciplined environment is essential for implementing such practices, we first review research on that topic, and follow with the research on drug use and violence prevention. The initial conceptual framework on classrooms, schools, and school-community relationships guides this discussion.

Research on Disciplined School Environments

Disciplined educational environments are organized to maximize engagement with learning and student development while minimizing disruptions. A disciplined environment is a worthwhile goal for every school. Even the most trouble-free and high-achieving environment needs continued reinforcement, and children and teachers need support to keep focused on their tasks. This is all the more important, and certainly more difficult, in an atmosphere of violence and defiance. Two broad areas related to disciplined environments are discussed here: school climate and organization, and classroom organization and management. Each includes discipline policy and practice issues.

The Role of School Climate and Organization

The close relationship between discipline and school learning is recognized by research as well as common wisdom. Clearly, school learning requires the disciplined efforts of students, efforts that include not only the acquisition and disciplined use of formal bodies of knowledge, but also a set of disciplined behaviors that includes attendance at school and classes, attention to and active participation in classroom lessons, and completion of class and homework assignments. Among adolescents, moreover, these fundamental academic habits are associated with broader dimensions of discipline; for example, the tendency to engage in disruptive or violent behavior or to drop out of school. (For a review of research on these points, see Feldhuesen, 1979; Finn, 1989.)

In the past decade, research has demonstrated that there are important school-to-school differences across secondary schools in these important student behaviors and outcomes, differences that cannot be completely accounted for by the background of students in a school. Three dimensions of school climate appear to account for these differences:

- Goals: a strong emphasis on the academic mission of the school (Purkey & Smith, 1983; Gottfredson & Gottfredson, 1985; Bryk & Driscoll, 1988);
- Rules and procedures: clear disciplinary standards that are firmly, fairly, and consistently enforced (National Institute of Education, 1978; Metz, 1978; Rutter et al., 1979; Gottfredson & Gottfredson, 1985; Hollingsworth, Lufler, & Clune, 1984; Bryk & Driscoll, 1988); and
- Climate: an "ethic of caring" that guides interpersonal relationships in the school (Lipsitz, 1984; Bryk & Driscoll, 1988).

Each of these aspects of schools can affect student outcomes independently, but when they occur in combination and are widely accepted and practiced, researchers have found that they constitute a powerful and coherent school "ethos" or culture that increases the engagement of students in the academic work of schools, decreases disruptive and violent behavior in schools, and leads to increased student achievement (Rutter et al., 1979; Newmann, 1981; Anderson, 1982; Purkey & Smith, 1983; Bryk & Driscoll, 1988).

The effects of disciplined school environments can be seen in the positive attitudes and behaviors of students and teachers. For example, in schools that emphasize academics, students care more about getting good grades, have a strong sense of academic efficacy (capability), are more interested in coursework, and, in secondary schools, do more homework and take more academic courses (Brookover & Schneider, 1975; Bryk & Driscoll, 1988). Teachers in these schools have a higher sense of teaching efficacy, hold higher expectations for student learning, are more committed to the continuous improvement of instruction, derive more enjoyment and satisfaction from their work, and report less absenteeism (Little, 1981; Ashton & Webb, 1986; Bryk & Driscoll, 1988). In schools with clear discipline standards, students and teachers feel safe and report having a clear understanding of school rules. Students feel that school rules are fair and that they can change unfair rules. Teachers report that all students are treated equally, that they can get advice from counselors about how to handle misbehaving students, and that they are provided with up-to-date information about problem students from the school administration (Gottfredson and Gottfredson, 1985).

In schools with a strong ethic of caring, students feel more liked by their teachers, report having good teachers, think that teachers are interested in them, and report that they value teachers' opinions (National Institute of Education, 1978; Bryk & Driscoll, 1988). Teachers report knowing more students in the school, including students who are not in their classes, and report higher levels of staff cooperation and support (Bryk & Driscoll, 1988).

Three general approaches to achieving disciplined environments conducive to learning have been suggested by researchers and policy analysts.

Changes in curricular standards and organization. One approach involves changing curricular standards and instructional organization in schools. Here, the main goal is to bring more focus to the school curriculum. At the elementary level, research on effective schools demonstrates that clear instructional objectives, "alignment" of teaching materials and tests to these objectives, and frequent monitoring of student progress are associated with higher levels of basic skills achievement (Purkey

and Smith, 1983). In high schools, increased graduation requirements and competency tests have been seen as ways of increasing the focus of the high school curriculum. Recent studies show that increased graduation requirements have resulted in students taking more academic courses (Clune, White & Patterson, 1988), but the effects of state and district policies governing course requirements and competency testing remain controversial and unclear (e.g. Darling-Hammond & Wise, 1985; McDill, Natriello, & Pallas, 1985; Rosenholtz, 1987). One study suggests that raising promotion and graduation standards may result in increased rates of academic failure, a known correlate of many adolescent problem behaviors (Gottfredson, Gottfredson & Hybl, 1990), but in general this is an open question.

Other research suggests that systems of academic tracking and ability grouping dilute the academic mission of the school, especially for low-achieving students (Oakes, 1992) who tend also to be from lower social classes and minority groups. In tracked or ability grouped systems, low-achieving students are exposed to less rigorous coursework (Oakes, 1992). Teachers also have lower feelings of efficacy and lower expectations for success when teaching students in low ability groups (Brophy & Good, 1979; Ashton & Webb, 1986; Raudenbush, Rowan & Cheong, 1992). Moreover, research consistently finds that students in low ability groups are more likely to have persistent discipline problems (Feldhuesen, 1979; Finn, 1989) and that middle and high schools with less academic tracking and ability grouping have fewer discipline problems (Bryk & Thum, 1989; Lee & Smith, 1992). In sum, tracking appears detrimental to student engagement and order in schools.

Changes in school organization. Other researchers have suggested that changes in school organization are needed to establish disciplined environments conducive to learning. Here, attention has been focused on reducing the size of schools and classes, under the assumption that interpersonal relationships among teachers and students will improve in smaller educational settings. Research confirms that interpersonal relationships among students and teachers are more positive in smaller schools (Newmann, 1981; Anderson, 1982; Bryk & Driscoll, 1988). Research also shows that smaller

secondary schools have fewer discipline problems (National Institute of Educatione, 1978; Gottfredson & Gottfredson, 1985; Bryk & Driscoll, 1988). In addition, Bryk and Driscoll's (1988) nationally representative study of high schools demonstrates that school size affects many of the variables associated with disciplined environments conducive to school learning.

Other studies suggest that departmentalization in junior and senior high schools results in large teaching loads that discourage the establishment of "personalized" relationships among students and teachers. McPartland (1987) has shown that self-contained classrooms in middle schools reduce the number of students that teachers work with, and he suggests that this accounts for the more positive interpersonal relationships among students and teachers in middle schools with self-contained as opposed to departmentalized teaching arrangements. Moreover, Lee and Smith (1992) report that middle schools with self-contained classrooms or team teaching arrangements have fewer discipline problems and higher academic achievement (Lee & Smith, 1992). Finally, Oxley (1990) suggested conditions under which "house systems" (students staying in smaller units) in large high schools have positive effects on social relationships and achievement in schools.

Research also suggests that in schools with disciplined environments conducive to learning, the work of teachers extends beyond the classroom. Bryk and Driscoll (1988) found that teacher (as well as student) participation in extra-curricular activities led to positive interpersonal relationships in schools (see also Rutter et al., 1979). Research further establishes that discipline problems are reduced when teachers take responsibility for discipline in both classrooms and corridors (Metz, 1978; Hollingsworth et al., 1984; Lawrence, Steed & Young, 1984;). Thus, when teachers' responsibilities extend beyond the classroom, more "personalized" relationships develop in schools.

An unusual kind of school organization is the alternative program--educating seriously disruptive students in separate settings either in the same school or elsewhere. Very few students are transferred to alternative schools for disciplinary reasons--only 0.5% of secondary students in 1990-91 according to reports from principals. But among secondary school principals nationally 38% felt that

the lack of adequate alternative programs limited their ability to maintain order (Mansfield & Farris, 1992).

Several studies report greater satisfaction with school, more positive attitudes, and improved behavior among students in alternative schools although academic achievement results are mixed (Duke, 1990; Gold & Mann, 1984; Heinle, 1976; Trickett et al., 1985; Wehlage et al., 1989). Contributing factors may include their generally small size, easier interaction between staff and students, and lack of conflicting expectations. Fewer rules, more flexibility, and greater tolerance of minor misbehaviors in alternative schools may also have been factors (Duke, 1990). But an alternative school with high standards and close supervision produced more learning at the expense of students' attachment to school and increased delinquent behavior (Gottfredson, 1990). And segregating "troupblesome" youth into alternative programs could stigmatize them making improvement more difficult. While in general alternative programs appear very promising, these findings suggest that the structure of alternative programs may contribute in important ways to their effects on students. Long term effects as well as relative costs also remain to be explored.

From this discussion we may conclude that smaller schools, self contained classrooms and an extended role for teachers all promote better discipline probably through more personalized relationships with teachers which has been called the ethic of caring.

Changes in school management. Finally, the development of a disciplined environment conducive to learning depends on school management processes. Clearly, leadership by school principals is important here. An extensive literature review by Leithwood and Montgomery (1982) shows that "effective" elementary school principals pay more attention than "typical" principals to instructional leadership, school discipline, and interpersonal relationships in the school. Effective principals bring about a focus on academics by highlighting instructional goals and priorities; they affect school discipline through active involvement in the disciplinary process and setting firm, fair and consistently enforced standards; and they appear to pay more attention to interpersonal

relationships in the school. Less effective principals, by contrast, devote more effort to routine administrative duties.

However, principals do not act alone in shaping the school environment. Instead, research repeatedly finds that schools with disciplined environments conducive to learning are characterized by participatory management. Clearly, this involves participation in decision making by teachers. For example, in schools with an emphasis on academics, teachers and administrators engage in collaborative planning for school improvement (Purkey and Smith, 1983). Teacher participation in school decision making is also associated with better school discipline (Gottfredson and Gottfredson, 1985).

Some commonly practiced rules and procedures deserve attention here also: the development of student discipline codes, due process procedures in suspension, the use of suspension, and in-school alternatives to suspension.

On discipline codes, a recent New Jersey Education Commissioner's report describes elements of a balanced code. It recommends that districts develop policies that protect students and staff from disruptive behavior, promote pride and respect for persons and property, and hold students accountable without being oppressive or unfair. It concludes by assuming that a good discipline policy contributes to positive feelings of self-worth and high school morale (Cooperman, 1990). A study of discipline policies in eleven diverse school districts reached similar conclusions (Duke & Cannady, 1991). Neither report measured effects on students directly. Issues for consideration in developing discipline codes might include student rights, expected student conduct, prohibited behaviors, sanctions, and disciplinary procedures (Foster, 1980).

As with school management generally, the involvement of staff in developing policies including discipline codes is important to gaining their cooperation. The evidence is mixed on whether involving students in school decision making reduces violence (Gottfredson & Gottfredson, 1985; McPartland & McDill, 1976).

On due process procedures, a 1975 Supreme Court decision (Goss v. Lopez) specifies that in short term suspensions (less than 10 days) school officials must present the reasons for the intended suspension and if the student denies misconduct they be presented the evidence and given a chance to tell their version of the event. The anticipated swell in lawsuits against schools did not materialize (Lufler, 1990), but many have felt these procedures impose an undue burden on school administrators. A national survey of secondary school principals showed that only 3% considered these procedures a large burden, and over 99% practiced them (Ashwick, 1986). Many went further by inviting parents to a hearing (88%), allowing third party evidence (73%) and an appeals process (95%). Thus measures to assure fairness in suspension proceedings seem well established, and fairness of disciplinary practices in turn is an important deterrent to misbehavior as noted above.

On suspension, over one million students were suspended out of school in 1990-91. Rates were higher in secondary schools, big schools, and areas with high concentrations of low-income families (Mansfield & Farris, 1992). While suspension temporarily rids the school of misbehaving youths, it also deprives them of instructional time and casts them into the community often unattended. It has been overused giving truants the free time they want, and applied more often against minority students (Moles, 1990). Most of the literature on suspension addresses legal and moral issues. Very little research exists on whether it affects student behavior or school safety (Toby & Scrupski, 1990). Because of these factors schools may want to reexamine this strategy, especially if many students are being suspended.

Short term in-school alternatives are used even more widely than suspension--1.4 million students sent to such programs for disruptive students. Such programs are now in 75% of all schools--with the same rate differentials by school level and other factors as for suspensions (Mansfield & Farris, 1992). Such programs vary widely from sheer isolation to academic remediation and counseling outside the classroom (Short & Noblit, 1985). Early studies showed a drop in rates of suspension after in-school alternatives were created, but more recent ones suggest that in-school

suspension is used for less serious offenses and that misbehavior is not necessarily reduced (Toby & Scrupski, 1990). One reason may be that most do not include academic tutoring or counseling (Knopf, 1991), features which should help reengage students with school learning. One good measure of a program's success would be its rate of return placement of students.

This discussion suggests that effective school management depends more on leadership and planning by principals and teachers to reach instructional, interpersonal and disciplinary goals than the use of common approaches such as suspension or in-school alternatives as currently practiced.

Remaining Questions

The studies reviewed here tend to examine changes in curriculum, school organization, and school governance in isolation rather than simultaneously comparing the effects of changes in all of these dimensions (for an exception, see Wehlage, Smith & Lipman, 1992). But focusing on the relative importance of a separate strategies may be misguided. It is likely that a disciplined environment will not result from a limited change in a single dimension of a school but rather will result from a multi-year, multi-modal approach to change that involves simultaneous attention to curriculum and instruction, school organization, schol governance, and social relations in the school (cf. Bryk & Driscoll, 1988; Gottfredson, Gottfredson & Hybl, 1990).

Finally, more research is needed on how the social context of schooling affects the likelihood that a large number of schools in this country will develop disciplined environments conducive to learning. Bryk and Driscoll (1988), for example, found that public schools are less likely than private schools to have the characteristics associated with a disciplined environment, and other observers have suggested that the regulation of schools by district, state, and federal authorities in areas such as personnel hiring or establishing multiple special programs reduces the ability of schools to achieve this kind of positive school climate (cf. Murphy, Hallinger & Mesa, 1985) although some public schools have managed to achieve disciplined environments despite tight regulations or mandates in such areas (Bryk & Driscoll, 1988). Clearly, the research issues here are complex, and more studies on sectoral

differences among schools and the effects of various regulatory strategies on school climate are needed before informed conclusions about these issues can be reached.

The Role of Classroom Organization and Management

Research on classroom organization and management focuses on the classroom structures and processes (and especially actions taken by teachers) that promote order and student involvement, which, in turn, are seen as prerequisites for student attainment of curriculum objectives. Comprehensive reviews of this research can be found in Brophy (1983), Doyle (1986), Emmer (1987), and Evertson and Harris (1992).

Three general characteristics of this body of research can be noted:

1. With the exceptions of some junior high school studies (see Evertson & Emmer, 1982), most of the research in this area has been conducted in elementary school classrooms. Caution is necessary in applying this body of knowledge to high school situations.

2. A fairly wide range of (a) urban and suburban (but few rural) settings and (b) student background characteristics are represented in management studies, but little, if any, of this work has been done in severely disruptive classrooms. It is not clear, therefore, that the research in this area can be applied to establishing disciplined educational environments in settings in which the problems of order are especially serious.

3. Two broad types of studies have been done in the area: (a) effectiveness studies, which focus on features of classes that differ on measures of orderliness (but seldom achievement); and (b) process studies, which consist of intensive examinations of processes of social organization, discourse, and activity flow in classrooms. The first type generates assertions about what conditions should exist in well-ordered classes, and the second produces information about how classroom conditions are established and orchestrated. The bulk of the research in this area falls into the second category of the

micro-processes of management, and the intended audience is teachers rather than policy makers. As a result, it is not always easy to connect research to policy in this area.

Establishing and maintaining order. Order in classroom management research does not imply silence or rigid compliance with externally imposed rules and regulations. Instead, order means that these elements all come together at once in a particular situation and students cooperate reasonably in the intended format or patterns of action (listening, working alone or with others, participating, following rules, etc.) for a lesson. By this definition, an orderly classroom may be filled with movement, conversation, and noise. Moreover, the nature and conditions of order vary across situations. From this perspective, a disciplined educational environment results from a teacher's ability to solve local problems of order.

The beginning of the year is an especially important time for establishing activities (see Emmer, Evertson, & Anderson, 1980). At this time, successful managers introduce rules, procedures, and routines to increase the efficiency and predictability of classroom events (Emmer, Evertson, & Anderson, 1980; Emmer et al., 1982; Emmer et al. 1981; Yinger, 1980). Research suggests that rule making involves complex processes of interaction and the negotiation of meaning (see Blumenfeld et al., 1979; Boostrom, 1991; Erickson & Shultz, 1981; Hargreaves, Hestor, & Mellor, 1975; Sieber, 1979). Thus, rule making cannot be avoided in classrooms, but it cannot be easily captured in a list of directives or techniques. The key point is that teachers need to introduce rules and expect to engage in a fairly protracted process of negotiation.

Monitoring plays a key role in establishing and maintaining classroom activities. Teachers must be aware of what is going on in a classroom and be able to attend to two or more events at the same time (see Kounin, 1970). The content of monitoring--what teachers watch when scanning a room--includes at least three dimensions. First, teachers watch groups, that is, they attend to what is happening in the entire room and how well the total activity system is going. Second, teachers watch conduct or behavior, with particular attention to discrepancies from the intended program of action.

This enables teachers to recognize misbehavior early, stop it before it spreads, and select the appropriate target for intervention. Third, teachers monitor the pace, rhythm, and duration of classroom events (see Arlin, 1982; Gump, 1969). In sum, teachers must learn to interpret classroom scenes as they engage in the typical duties of instruction: explaining, questioning, discussing, probing, etc.

Classroom arrangements and teaching styles. Involvement is highest generally for students in teacher-led small groups and lowest for pupil presentations. Between these extremes, engagement is higher in whole-class recitation, tests, and teacher presentations than in supervised study, independent seatwork, and student-led small groups (Gump, 1969; Ross, 1984; Stodolsky, 1988).

The physical characteristics of a classroom, including the density of students, the arrangement of desks, and the design of the building (open space vs. self-contained) also affect the probability of inappropriate and disruptive behavior as well as the difficulties a teacher encounters in preventing or stopping such behavior (Gump, 1982; Weinstein, 1979). In general, the more loosely structured the setting, the more likely that inappropriate behavior will occur. Similarly, the greater the amount of student activity choice and mobility and the greater the complexity of the social scene, the greater the need for the teacher to be a skilled manager (Kounin & Gump, 1974).

Highly structured forms of cooperative learning have been shown to increase student achievement (as measured by standardized tests), but only if they incorporate group goals and individual accountability (Slavin, 1989). Such methods have also been shown to improve intragroup relationships. This finding cannot be generalized to include all forms of small group instruction, however. Indeed, small group instruction is often especially problematic from the perspectives of management, curriculum, and student learning (Good, McCaslin, & Reys, in press). Such arrangements are often difficult to manage, tasks are poorly designed so students' attention is focused on procedural rather than substantive matters, the emphasis is on drill and practice rather than problem solving, and students become passive rather than active learners.

Academic work and curriculum. The type of work students are assigned is related to classroom order. It is sometimes assumed that challenging assignments will automatically lead to high student engagement. But classroom studies indicate that this is not always the case, even with high achieving students (see Davis & McKnight, 1976; Doyle, 1983; Doyle & Carter, 1984; Doyle, et al., 1985; Sanford, 1987). When academic work is routinized and familiar to students, the flow of classroom activity is frequently smooth and well ordered. When work is problem-centered, that is, students are required to interpret situations and make decisions to accomplish tasks (e.g., word problems or essays), activity flow can be slow and bumpy. Managing higher-order tasks requires, therefore, exceptional management skill.

This intrinsic tension between the demand for order and the need for students to have unstructured opportunities to explore, solve authentic problems, and construct their own meanings is at the center of any conception of a disciplined educational environment. Clearly, school policies that define order as silence and conformity can force teachers to focus on drill and practice and preclude valued curriculum experiences. At the same time, the demands of loosely structured settings and open-ended tasks must be acknowledged and teachers provided a supportive environment to solve the problems these types of curricular patterns often pose.

Two additional aspects of curriculum and instruction in classrooms warrant attention:

1. For basic skills, the time students spend working on content measured on the achievement test (academic learning time) is positively associated with achievement test scores (Anderson & Burns, 1989; Fisher & Berliner, 1985). This is a not an altogether surprising finding: Students learn what they are taught. The key issues are matters of substance rather than quantity, however: (a) what are they being taught; and (b) is the test measuring valued educational content. Time must be used well, but more time does not necessarily mean more achievement.

2. Teachers' expectations can affect students' achievement (Good & Brophy, 1991). Teachers naturally gather a great deal of information about students during instruction, and their use of this

information can influence students' achievement. If a teacher uses information about a student's low achievement to set easy tasks, avoid asking the student questions, excessively prompt the student to get answers, and otherwise expect and demand less from the student, then the student is likely to become more passive and avoid academic work. In the end, such low expectations can lower achievement. On the other hand, realistic expectations coupled with efforts to help the student learn can have a positive effect on achievement. However, high expectations will not, by themselves, produce high achievement. But as students experience success, their perception of the school environment and themselves as learners improve, thereby contributing to a disciplined environment.

The concept of learning styles has considerable popular appeal: Students differ among themselves in a large number of readily visible ways and these differences certainly must affect how they respond to or benefit from how they are taught. Despite the wide popularity of this belief and the considerable attention it has received (see, e.g. Dunn & Dunn, 1978; Witkin, Moore, Goodenough & Cox, 1977), clear interactions between learning style and teaching processes have eluded researchers. Cronbach and Snow (1977), for example, concluded from their massive review of research that "basing instructional adaptations on student preferences does not improve learning and may be detrimental" (p. 170). The best evidence in this area suggests that (a) no single dimension of learners unambiguously dictates an instructional prescription; (b) most interactions between learning style and instruction vary by local conditions, such as what is being learned and who is teaching; and (c) most students adapt readily to a variety of instruction modes, even ones they do not necessarily prefer (Good & Stipek, 1983; Wang & Walberg, 1985).

Dealing with misbehavior. From the perspective of the classroom situation, misbehavior is any action that threatens to disrupt the primary action system in a classroom. Most problems of misbehavior in classrooms are related to attention, crowd control, and getting work accomplished (see Duke, 1978). Actions perceived as misbehavior are likely to be public, that is, visible to a significant portion of the class, and contagious, that is, capable of spreading rapidly or pulling other members of

the class into them. For classes in which students are easily distracted from academic work, misbehavior is likely to be common (see Felmlee & Eder, 1983; Metz, 1978). While all teachers need to be good managers, the best managers, need to be assigned to such classes.

Interventions to stop misbehavior, and thus restore order, occur frequently in classrooms (Sieber, 1976). Despite their frequency, such interventions are inherently risky because they call attention to potentially disruptive behavior, and, as a classroom event, they can pull a class further away from the primary agenda and weaken its function in holding order in place. There is, in other words, a "ripple" effect for teachers' reprimands (Kounin & Gump, 1958). Because of these risks, interventions often have a private and fleeting quality that minimizes their effect on the flow of events. Successful interventions occur early in response to misbehavior, are often quite brief, and do not invite further comment from the target student or students. Thus, teachers tend to use a variety of unobtrusive nonverbal signals (e.g., gestures, direct eye contact, and proximity) to regulate misbehavior, and the majority of spoken interventions consist of simple reprimands: "Shh," "Wait," "Stop," or "No" (Humphrey, 1979; Sieber, 1976).

A variety of discipline models are widely used, e.g., Teacher Effectiveness Training, Assertive Discipline, Reality Therapy, and Adlerian approaches (see Charles, 1992) but very little research exists on their effectiveness beyond teachers' self-reports and testimonials (see Emmer & Aussiker, 1990). Certainly there is little ground for the exaggerated claims of benefits often made by promoters of these models. Successful strategies for dealing with serious misbehavior (e.g., crimes, violence) appear to require a school-wide commitment, a large investment of resources, and collaborative involvement of students, community, parents, and school staffs (see reviews by Doyle, 1990; Rubel, 1990). The clear implication is that schools need to have comprehensive discipline plans that involve a wide range of participants, and school personnel should expect to make large investments of time and energy in this area if serious misbehavior is frequent.

Behavior modification techniques, involving contingent use of teacher attention, privileges, soft verbal reprimands, response cost, and time out, are widely discussed as tools for helping teachers work with individual students having serious behavior problems in classroom settings (see Brophy, 1983; Elardo, 1978; Emmer, 1987; Lahey & Rubinoff, 1981; O'Leary & O'Leary, 1977). Dramatic successes are often reported, although very elaborate reinforcement systems are often impractical for classroom teachers. Moreover, using rewards for desired behavior or academic performance can have deleterious effects on intrinsic motivation (see Leeper & Greene, 1978). Attention has recently turned to systems for teaching students social skills, coping strategies, and self-monitoring and self-control strategies (see Cartledge & Milburn, 1978; Brophy, 1983).

Corporal punishment is practiced widely, and, although the Supreme Court has ruled that it is not cruel and unusual punishment, many states have banned this practice in public schools (Golden, 1989). There are also problems of discrimination: Male and minority students receive disproportionately more of the over one million instances of corporal punishment reported annually (Innerst, 1988). Supporters argue that corporal punishment is an effective, inexpensive, and sometimes necessary action to maintain school order. Critics argue that it is dehumanizing, ineffective, physically and psychologically harmful, and teaches that violence is an acceptable way to handle problems (Buechler, McCarthy, & Dayton, 1989). Research suggests that the effects of corporal punishment are unpredictable since students who are punished may actually gain status among peers. It does seem to cause resentment, undermine working relationships, and focus on unacceptable rather than acceptable behavior (Brophy, 1983; Doyle, 1990). In view of its potentially negative effects and the lack of systematic evidence of benefits, corporal punishment might best be avoided.

Policies and classroom processes. For a variety of reasons, little, if any, research has been done on how state or district policies actually affect classroom processes. (Such studies would be very difficult to design and execute.) At the same time, it is clear that findings from research on teaching are sometimes converted into simplistic solutions that emphasize quantity (e.g., more time, more

homework, less TV) rather than quality and substance. But quality and substance are always central to the issue of achievement. Moreover, school problems are deeply embedded in social structures and motivations (poverty, expectations for employment, etc.) and thus teaching cannot be viewed in isolation from these issues. Finally, testing policies that emphasize rote learning, inservice mandates to adopt uniform practices in the face of complex problems, and public images of inferior teachers and students can narrow the curriculum, decrease teacher morale, and undermine students' motivation to do school work. Similarly, policies that emphasize passivity, obedience, and control in classroom management can sabotage efforts to promote conceptual understanding and self discipline (McCaslin & Good, 1992).

One of the central issues emerging in classroom research and policy discussions is the question of student outcomes. Many of the findings in this field are based on mandated standardized achievement tests that for the most part, measure lower-level cognitive skills. But the emphasis is shifting in the national curriculum debate to higher-order skills, conceptual understanding, problem solving, and self-regulation (e.g., the National Council of Teachers of Mathematics, 1989) for all students and especially disadvantaged students (see Knapp & Shields, 1991). But such tasks are often difficult to manage in classrooms. Thus, considerably more needs to be known about the design and management of curriculum tasks that foster conceptual understanding (see Doyle, 1986; 1990; Lampert, 1986). Working toward creating classrooms conducive to this kind of active learning is also important for attaining Goal Three which is concerned with helping students "learn to use their minds well."

Finally, several major implications for policy and practice emerge from this survey of classroom management research:

1. Teachers need to be provided the time to reflect on the situations in which they work and the support of professional colleagues in devising ways to achieve and sustain order and promote students'

understanding and achievement. This is especially true for new teachers, and mentor programs seem promising strategies.

2. All teachers need time to consider management issues whenever there is a substantial change in curriculum, organizational arrangements, instructional policies, or the composition of the student body. At such times it is difficult to anticipate problems.

3. The beginning of the year is a critical time in the creation of classroom order. Teachers need to concentrate on getting their classes up and running well as soon as possible. Interruptions, abrupt changes in class enrollments, and the like can seriously impede this process.

4. The rhythms and patterns of classroom life should be respected. Interruptions throughout the year should be minimized and teachers warned early if schedule changes will affect their classes. This policy tells students that learning is important and increases the predictability of teachers' work.

5. Finally, school-wide policies and a support system are needed to deal with serious misbehavior problems. Such policies clarify issues and create a climate and common commitment for addressing school discipline. A functioning support system means the individual teacher is not isolated when confronted with serious disruptions.

Research on Drugs and Schools

The drug use prevention field has evolved from a reliance on simplistic approaches to one of combining several strategies to address multiple risk factors for substance use. Considerable activity has been underway in the research community in recent years to identify effective prevention strategies and to promote the implementation of the most promising ones to address the multiple risk factors confronting many of our youth (Botvin & Dusenbury, 1989). Reducing alcohol use as well as other drug use among adolescents requires a multipronged effort aimed at multiple risk factors. Programs

that target a single risk factor, such as self-esteem or poor school achievement, are unlikely to have a significant impact (Ellickson & Hays, 1991).

Risk and Protective Factors for Alcohol and Other Drug Use

All adolescents are potentially at risk for drug use given the widespread availability of legal and illicit drugs. Yet, some adolescents are at higher risk than others due to a variety of individual, family, and other environmental factors that seem to influence a child's first use of drugs. The following summary draws heavily on the recent work of Hawkins and his colleagues (1992) which includes a large reference of other research efforts for further reading in this area:

- Individual psychological and interpersonal factors. These include needing the approval of others; letting others make one's decisions; being unassertive; having low self-confidence; showing early aggressive or antisocial behavior; low commitment to school; and poor school performance. One of the strongest predictors of drug use by teens is association with drug-using peers, as well as their attitude toward drugs. Beginning in the late elementary grades, academic failure increases the risk of both drug use and delinquency. Conversely, some of the protective factors that appear to bolster a child's resistance to drug use are self-confidence, strong social competencies, peers who value achievement and responsible behavior, and clear adult supervision.

- Family factors. Tolerance of substance abuse by parents and older siblings can be compounded by a family history of alcoholism, drug use, or mental illness, and poor family management and parenting skills. While parents who

abuse drugs are more likely to have drug abusing children, the question of the relative influence of heredity and environment has not been resolved. It is clear, however, that parents who are considerate and supportive, yet firm in their beliefs, seem to protect their adolescents from drug use (Baumrind, 1991). And parents who monitor their children's activities carefully and influence their choice of friends are also more effective in preventing experimentation with drugs (Hansen et al., 1987; Hays & Revetto, 1990; Reid, 1989)

- Broader environmental factors. These include community norms regarding alcohol and other drug use, and their real or perceived availability; unclear or inconsistently enforced rules and laws; community characteristics such as poverty, mobility, and violence; and contradictory messages in the media about drug use. The mass media and advertisements tend to glorify the use of alcohol and other drugs and target their messages to young people. These types of messages may be more powerful than public service announcements that address drug use as a problem.

Schools influence youth in many ways such as shaping their daily activities, with whom they interact, and their self concepts. With transition to middle, junior and senior high school, youth enter progressively less protected school environments (OTA, 1991). Schools can compensate for this instability in many ways by guiding and supporting students' daily social, recreational and educational activities, improving their self-concept by recognizing a variety of student accomplishments, and by facilitating a variety of student groupings and interactions (Benard, 1992). Students who like school and have a close relationship with teachers are more likely to accept

and adopt non-use peer norms than those who do not. Conversely, the number of drug using friends has the most direct influence on students' drug use. (Reid, 1989). Correcting for erroneous perceptions of the prevalence and acceptability of drug use among peers is critical (Hansen & Graham, 1991). Perkins (1985) found a direct effect of strength of commitment to religious faith on alcohol and other drug use.

Researchers also agree that young people who experience a large number of individual risk factors are more likely to use alcohol and other drugs and to experience severe social and health consequences associated with abuse. Research in the last decade recognizes that there is an association between certain types of behaviors and points out the need to develop common versus separate interventions for each specific problem. Weissberg (1989) believes that though such problem behaviors may share a common processing framework the program content addressing students' belief and knowledge within each domain would differ considerably; more specifically, generic skill training will not adequately address multiple domains. According to Weissberg (1989), both Jessor and Garmezy believe that social competence may serve as a protective factor against such problem behaviors as substance abuse, teen pregnancy, and school dropout.

According to Hawkins and his colleagues (1992), "protective factors mediate or moderate the effects of exposure to risk" by fostering resilience. Most drug use prevention strategies target two risk factors, laws and norms favorable to drug use and social influences. Current evidence suggests, however, that an effective strategy must target a broad spectrum of risk and protective factors related to individual vulnerability, inadequate child rearing, school achievement, social influences, social skills, and broad social norms. Further, multicomponent strategies focusing on reducing multiple risk and enhancing multiple protective factors hold promise. Such a strategy would involve health, education, and human service delivery systems.

Benard (1992) indicates that the challenge for the 1990s is to develop and implement strategies that help youth succeed in staying drug-free in spite of adverse conditions in their families, schools and communities. For healthy development across all three domains, she identifies the following three protective factors as essential to creating and enhancing personal and environmental attributes: (1) caring and supportive relationships (2) high expectations for appropriate behavior, and (3) a variety of opportunities to participate and contribute in meaningful ways. Ultimately, strong linkages and collaboration among the family, school and community are required for the healthy development of our youth. Supportive activities within each of these domains are described below.

Within the family. Parents can create and nurture a close bond with their child throughout childhood and adolescence; create expectations for their child's success; provide warmth, clear rules, and discipline; instill beliefs that provide stability and meaning to their child's life, especially in times of hardship and adversity; and treat their child as a valued, contributing member of the family.

Within the school. Teachers can acknowledge their role not only as academic instructors, but as caregivers. They can be confidants and positive role models for students. They can also encourage relationships with caring peers and friends through, for example, peer programs and cooperative learning strategies. Successful schools - those with low levels of delinquency and misbehavior and high levels of attendance and academic attainment - share the following characteristics: a variety of activities that engage students' interest and desire to succeed; and opportunities for students to be actively engaged in problem solving, decision making, planning and goal-setting activities, and helping others.

Within the community. The community can link its available resources in the areas of health and child care, housing, education, job training, employment, and recreation to address the needs of children and families. The community can also view prevention of drug use as a shared value and responsibility and establish norms accordingly. By providing youths with opportunities to be

meaningful participants and contributors in community life, the community gives evidence that it values them as resources.

PREVENTION STRATEGIES

This section will focus on interventions which have been employed as primary prevention strategies. Primary prevention strategies are defined by OSAP as "activities which assist youth in developing mature positive attitudes, values, behaviors, skills and life styles so that they do not need to resort to the use of drugs." According to Weissberg and his colleagues (1989), primary prevention "represents a network of strategies that engineer environmental systems and/or strengthen people's personal and social resources to promote adaptive behavior and prevent psychopathology in large groups of people." Due to the need to develop competence training to cope with stressful transitional life-events from school entrance, puberty and into adulthood, Weissberg and his colleagues (1989) support the need to develop preschool through high school social competence promotion programs. Such programs would provide children and adolescents with an ability to successfully achieve social goals in a manner that is mutually rewarding to the child and to others in his/her environment.

Following are interventions and a brief description of what the research says about current interventions and their impact on student drug use:

Laws and Regulations

Evidence suggests that laws and regulations can play a supportive role in controlling alcohol use provided these laws are clearly communicated, supported by the community, and equitably enforced. For example, a decline in drinking has been due in part to the enactment of laws raising the legal drinking age to 21. This has reduced alcohol-related traffic deaths and reinforced the control of alcohol use (Botvin & Botvin, 1992).

School Policies

Almost all public school districts and private schools have written policies on drug use as a part of their schools' disciplinary policy. Most of these policies probably have changed significantly over the past six years due to federal requirement guidelines. Currently all school districts receiving federal funds must establish standards of conduct for all students regarding drug use, possession and sale as well as provide a K-12 developmentally appropriate drug prevention education program.

Within the last three years, 85 percent of public school districts have changed their alcohol policies; 84 percent their tobacco policies; and 88 percent their policies related to other drugs (Carpenter, 1992). The impact systemwide of policy revision and enforcement across school districts has not been determined. However, recent studies of school smoking policies which emphasize prevention of use in or near school grounds appear to affect smoking behavior primarily through the clear specification of norms rather than enforcement of policy violations. According to Pentz and colleagues, these policies have not shown reduction in smoking (Hawkins, Catalano & Miller, 1992).

During this time period, drug policies have also evolved primarily in two phases. First, the adoption of a strong "zero tolerance" of substance use leading to absolute disciplinary outcomes (i.e., long-term suspension/expulsion). Second and more recent, the recognition that enforcement is not an end in itself in resolving long-term problems but must include rehabilitation. Many policies now reflect alternative plans of action. For example, the Flowing Wells School District (AZ) in some instances will give the student an alternative to suspension. This alternative is a carefully monitored plan that includes mandatory intensive counseling, periodic urinalysis testing, and community service. The District indicates that their data suggests that this alternative is being used with increased frequency as students and their parents weigh the choice between rehabilitation with a view to a drug-free life and further education, or loss of the opportunity to continue school due to suspension or expulsion.

A policy of zero tolerance, for many students, provides a "safe haven," an opportunity to say no in a setting where being drug free is the norm and the "acceptable thing to do." Schools which aggressively involve parents with a "zero tolerance" approach create a strong partnership which boosts the chances for program success. It is strongly suggested that any policy development should include extensive community involvement since this investment is essential to its success. It is also strongly urged that an evaluation component be included to provide schools with benchmark data regarding changes in student attitudes and behaviors (Hendricks, personal communication, 1992).

Information Programs

Of the 42 substance abuse prevention programs reviewed by Hansen (in press), over 90 percent had an information component which dealt with the consequences of using substances. Information was deemed to be a necessary, but not sufficient component of programs.

There is no clear evidence that only providing information about drugs or arousing fear of drug use are effective means of preventing the onset of substance abuse behaviors (Hansen and colleagues 1988). The OTA Report (1991) concluded that information-only substance abuse education (excluding anti-smoking studies) may alter knowledge and attitudes, but is unsuccessful in changing drug-using behaviors of students.

There is some controversy among experts about the wisdom of emphasizing "designated drivers" or "safe rides" and moderate drinking rather than abstinence for those under the legal drinking age. However, all of these activities support efforts to reduce automobile crashes. There has been some decline over a three-year period in students riding with friends who have been drinking, according to a 1992 statewide study in Minnesota.

The degree to which pledges and other forms of public commitment are effective is unknown (Hansen, in press).

Affective Education Programs

Affective education programs focus on self-examination, increasing self-esteem, responsible decisionmaking, and values clarification, but do not relate these general skills to resisting specific drug situations. Most studies show such programs have little effect on reducing drug use. When there is evidence of effectiveness, the benefits appear somewhat more likely for reducing marijuana and tobacco use than alcohol use. Affective approaches probably have not worked in part because they do not use appropriate techniques for facilitating skills acquisition; therefore, deficiencies relate to the teaching method (Botvin & Dusenbury, 1989). It is also likely that they have been ineffective because they are based on an incomplete theoretical model and do not include relevant domain-specific material (Botvin & Botvin, 1992).

Social Influence/Resistance Strategies

According to some topologies, key components of social influence/resistance skills programs include both refusal skills training and norm-setting activities. Refusal skills training includes identification of sources of pressure to conform and teaches methods of countering negative influences. Norm-setting is defined as correcting erroneous perceptions of the prevalence and acceptability of drug and alcohol use and establishing conservative norm groups against use. This is often done by conducting a school-wide survey of drug-use and providing feedback to students. Youth who experiment with substances typically grossly overestimate the prevalence and acceptability of use among their peers, thus setting up an internally driven source of pressure to conform (Hansen & Graham, 1991).

Rohrboch and colleagues (1986) found that students receiving resistance training have greater knowledge of the social pressures to use alcohol, and greater knowledge of methods for resisting those pressures. However, Hansen and colleagues (1988) found that students receiving resistance training showed no changes in their confidence in being able to say "no" or the level of difficulty to do so.

With regard to behavior, most studies including Kim and colleagues (1989) found that prevention efforts which assist youth to develop skills to resist pressure to use drugs have shown modest but significant reduction in delaying the onset and prevalence of cigarette smoking after training. A few studies including Hansen and colleagues (1988) have reported beneficial efforts of the strategy in preventing or delaying the onset of alcohol and marijuana use. Hansen (in press) concludes that social influence programs are promising in preventing the onset of substance use behavior.

In a recent study by Hansen and Graham (1991), resistance skill training in and of itself was not found to significantly affect the onset of either tobacco, alcohol or marijuana use. When norm-setting was studied separately from refusal skills training, it was the norm-setting education that resulted in significant reduction in tobacco, alcohol, and marijuana use.

Peer- or student-led social influence resistance strategies, versus teacher-led, have achieved greater reduction in drug use in some studies partly due to greater fidelity in curriculum implementation by peer leaders. (Botvin et al., 1990) and arguably because of higher credibility with high risk students.

Student Support and Assistance Services

Student support and assistance services are defined as non-academic services provided by the school that work in concert with other prevention program efforts. They include activities such as student support groups, mentoring programs, and drug-free events, and are primarily designed for students who are currently using or abusing alcohol and other drugs or who are considered at high risk for developing substance-related problems. Unfortunately, the evidence for the effectiveness of student support and assistance programs is limited given the absence of a solid base of research.

Alternative Activities and Programs

Both school- and community-based interventions have used alternative programs to alter the adolescent's environment to promote non-drug use. Alternative activities and programs attempt to

provide positive activities to prevent drug use or focus on overcoming individual deficits in basic life skills, low self-worth, and experiences that place adolescents at risk. Schaps and his colleagues, (1981 and 1986) found that none of the alternative approaches had an impact on substance use behavior.

Tobler (1986) found that with high intensity, alternative programs that empower high-risk adolescents, like drug abusers and juvenile delinquents, to master new basic life skills are associated with improved behavior and achievement. Further investigation for drug prevention effects is needed.

The Importance of Ongoing Prevention Activities

Follow-up studies by David Murray and his colleagues at the University of Minnesota and Allen Best and his colleagues at the University of Waterloo indicate that initial prevention effects tend to gradually erode and further effects tend to wash out (after 4 or 5 years). A prevention strategy that has been effective in maintaining or increasing initial prevention effects is the "booster-curriculum." For example, a booster curriculum was designed to reinforce material taught the previous year to 7th graders in the substance use prevention program. Use of a booster curriculum produced significantly better results in terms of onset or reduction in use of tobacco, alcohol and marijuana than when the booster curriculum was not implemented (Botvin, 1990). Thus, the erosion of program effects can be prevented and even enhanced through "booster" sessions (Botvin, Renick, & Baker, 1983; Botvin et al., 1990). Duryea and Okwumabua (1988) concur that resistance to persuasion is maintained at a higher level when subjects receive periodic, sequential, and meaningful "booster" sessions. Therefore, interventions beginning in elementary, middle and junior high schools need to continue through high school.

According to Botvin, more research is needed to better understand the appropriate duration of prevention programs. Still, one thing is clear: a problem of the magnitude of drug use which is promoted and sustained by a combination of powerful psychosocial factors cannot be prevented through minimal interventions lasting a few sessions during one or two semesters of middle/junior

high school. To offset the many powerful determinants of drug use it will be necessary to develop and implement even more powerful and sustained preventive interventions (Botvin & Botvin, 1992).

Future Directions in Prevention.

The National Commission on Drug-Free Schools Report (1990), recommended that comprehensive drug education and prevention programs include the following elements: (1) Student surveys to determine the nature and extent of the drug problem, school needs assessments, and resources identification; (2) leadership training for key school officials; (3) clear, consistent school policies with responses to violations that include alternatives to suspension; (4) training for the entire staff on the effects of drug use, the school's drug policy and policy implementation, and intervention and referral of students; (5) assistance programs and support for students from preschool through grade 12; (6) training for parents to assist them in understanding drug use prevention and related issues and concerns; and (7) appropriate, accurate and factual curriculum for preschool through grade twelve.

A 1992 Government Accounting Office report focused on ten comprehensive community-based drug prevention programs targeting 10-13 year old high-risk youth in rural and urban settings. While the effectiveness of these programs was not assessed, a number of their features were identified as promising:

> (1) A comprehensive strategy; (2) An indirect approach towards drug prevention rather than addressed directly or called a drug prevention program; (3) A focus on empowering youth by teaching them a broad range of skills necessary to choose positive, constructive options; (4) A participatory approach that required group cooperation, planning and coordination to accomplish tasks; (5) A culturally relevant approach; and (6) highly structured developmentally appropriate activities for younger adolescents (9-12 year olds).

The most promising type of strategy appears to be a comprehensive one which includes multiple component systems (peergroups, family, schools, media, community organizations) and aspects of a wide variety of approaches (e.g. providing accurate information, developing life skills, utilizing peer facilitator, and changing community policies and norms) to prevention (Hansen, 1990; Hawkins, Catalano & Miller, 1992; Botvin & Botvin, 1992; ED Interim Report to Congress, 1992). Community support, parent involvement, and peer involvement enhance program success. The teacher also plays a critical role, and teacher training is essential (Summerfield, 1991). Early evaluations of such comprehensive approaches have shown short-term positive effects in changing social influences to use drugs, which in turn changes drug use behavior (ADAMHA, 1990).

Remaining Questions

Despite the progress made over the past decade, much work remains. Several researchers (Tobler, Hansen, Botvin, and Bangert-Drowns) and the ED Interim Report to Congress (1992) view the need for additional research to determine: (a) the impact of the most promising prevention approaches on illicit drug use; (b) the durability of current prevention approaches through long-term follow-up studies; (c) the active ingredients of effective prevention approaches through the isolation and testing of prevention components; (d) the impact of current prevention approaches on different ethnic/racial groups; (e) effective methods of disseminating promising prevention programs/methods; (f) the relative efficacy of different prevention channels (i.e., schools, churches, media, family, community-based organizations); (g) the extent to which preventing early initiation or delaying initial use reduces later abuse; (h) methods for increasing the interest of program participants and enhancing program compliance; (i) the most appropriate age/developmental period for initiating prevention programs; (j) the optimal combination of prevention components; (k) the extent to which programs targeting younger populations are effective; (l) the characteristics of program providers which may

either enhance or undermine the effectiveness of prevention programs; and (m) how to identify and overcome barriers to effective program implementation, and maximize implementation fidelity.

Research on Violence in Schools

Violence in schools may take several forms. The presence and use of weapons is the most serious but fights, assaults, and robberies are other examples. Intruders and gang members among students also pose the risk of bodily harm or threats of harm on school grounds. Each of these will be discussed below, although the research evidence on strategies to contain these forms of violence is generally sparse.

Weapons in Schools

Students may bring weapons to school for various reasons: to show off, as protection, to hold them for others, and for personal aggressive purposes that sometimes concern gangs and illegal drug activities. Although knives are the most common weapon brought to school, increasingly powerful firearms are also readily available to students. (OJJDP, 1989). Weapons in schools are a reflection of their easy access in the community, presence in many homes, and the apparent widespread attitude in American society that violence is an effective way to solve problems (Butterfield & Turner, 1989).

Various ways have been tried to prevent lethal weapons from coming into schools. Stationary metal detectors at the door and random searches with hand-held detectors are commonplace in some cities. Locking outside doors, searching student lockers, and campus security patrols are other ways some schools try to bar weapons. There is no systematic evidence on the benefits of any of these approaches, and each has certain shortcomings. Metal detectors at doors have proven especially controversial. While they are easy to set up, require little training, and are effective in spotting weapons, they are seen by some as an invasion of privacy, a logjam to entry, and creating a fortress

image of schools. Locking doors can become a fire exit obstacle while searches and patrols are expensive and time consuming (Butterfield & Turner, 1989).

Educators and school security experts at an Urban School Safety Practicum sponsored by the National School Safety Center described their practices for keeping weapons out of schools (Butterfield & Turner, 1989). Some which might be tested for effectiveness include the following: encouraging tips from students, posters against guns in schools with a hotline number, requiring that coats and book bags be kept in lockers, violence prevention curricula (see below), peer counseling programs, and immediate suspension and expulsion. However, participants noted that expulsion may simply transfer the problem to the streets and is not a realistic long-term educational solution (see also discussion of suspension). Overall, strategies to keep weapons out of schools have not been tested on a systematic basis. Most of these strategies try to control student actions rather than the factors contributing to behavior. While control may be important to stabilize threatening situations, such strategies may be less useful in the long run than changing the ways schools are run to engage students more fully in academic work (see section on disciplined environments).

Intruders

Barring unwanted and potentially threatening persons is a concern in many schools. Metal detectors and locking outside doors can also be used to bar intruders, but as noted their use is controversial and their worth unproven. Exit doors can, however, be fitted with electromagnetic locks set to open when a fire alarm is set off, and school additions can be designed with security in mind (Gerl, 1991).

Supervision by staff or security officers may also help secure school entrances, and uniformed officers are described as a "strong deterrent to crime" (Quarles, 1989). Security aides can also monitor campuses and may be given police powers to demand that unauthorized persons leave (Gaustad, 1991). Staff and students who stay after school are advised to avoid remote areas, form buddies, and lock

inside doors (Quarles, 1989). The efficacy of these precautions as well as security officers and aides is not documented by systematic studies. Schools trying to bar intruders would do well to plan their strategies carefully and then monitor their intended and unintended effects over some period of time.

Fights and Assaults

Both of these acts involve bodily harm or threats of harm, although in a fight it is sometimes difficult to determine who was the initial aggressor. Robberies also involve threats or harm to persons in the process of taking things, but no programs or studies were found on dealing just with robberies in schools. There is research, however, on curricula to prevent violence and on conflict management training for students, and these have been somewhat successful.

The well-established Violence Prevention Curriculum Project (Prothrow-Stith, 1987) uses information and role playing to examine anger and the control of violence among high school students. Ten sessions discuss risk factors, the role of anger in interpersonal violence, channeling anger constructively, and alternative means of conflict resolution. A six city evaluation showed marginal benefits regarding self-esteem, locus of control, fights in the last week and arrests. While problems in implementing the study design limit interpretation of the findings and long term follow-up would be desirable (Wilson-Brewer et al., 1991), this is still a very promising program.

A survey of 51 school and community based programs has concluded that none were rigorously evaluated and found effective in preventing violence among young adolescents. While one-fifth had an outcome evaluation, these were mostly pre and post tests of knowledge and attitudes rather than behavioral changes. Control groups were often lacking. Incomplete evaluation data did, however, suggest that a few of the programs are promising and deserve further study. These include the Violence Prevention Curriculum Project and several other school curriculum approaches (Cohen & Wilson-Brewer, 1991).

In the last decade a number of programs teaching conflict resolution skills to students have also been developed. Some also include peer mediation and staff training. Many focus on young children (Lam, 1989). Each aims to encourage self discipline, effective decision making skills, and exploration of non-violent responses to disputes. Interest in this approach is so great that the Healthy People 2000 report of the U.S. Public Health Service calls for teaching nonviolent conflict resolution skills in half the nation's schools by the end of this decade.

A review of 14 studies of mediation and conflict resolution programs concluded that they had some benefits for the peer mediators, the student body and teachers. Success rates of mediation were generally high, student attitudes toward conflict changed, and fewer fights were reported. None of the studies showed undesirable effects of school mediation programs, but few measured the same things and the research designs were generally weak. In most cases the evidence was stronger from anecdotes and qualitative data than from systematic quantitative studies (Lam, 1989). These programs hold considerable promise and deserve careful further study. It should be noted, however, that these and other skills training programs involve changing people's behavior directly. Another promising preventive approach is to change the school practices, such as tracking, which contribute to student conflict in the first place.

Some urban school systems have also provided self defense training to students and staff, but the effects of such training have not been studied. Special education staff are also sometimes trained to restrain their students who have violent outbursts, but no studies of this training were found either.

Gangs

Gangs are similar to other organizations in having a name and distinguishing features, continuing members, and claiming a territory, but in addition they engage in criminal activities. Youths may become involved with gangs for various reasons such as power and prestige, peer pressure, self-preservation, adventure, money and limited opportunities elsewhere. (Riley, 1991).

Gangs appear to be spreading from large cities to suburbs, smaller towns and different regions of the country to avoid pressures from police and rivals, and to expand drug markets (Gaustad, 1990).

Schools do not have the same powers as law enforcement agencies, and may instead do best by creating a nurturing environment for all students where academic success and social support become attractive alternatives to gang activity. There is little research in the area of specific actions schools might take, but considerable advice from experts. This includes training staff about gangs, procedures to keep out intruders and gang member students migrating from afar, eliminating gang graffitti and insignia in schools, clear and consistent discipline standards, alternative education programs for disruptive students, teaching students social skills to help make wise choices, involving students through a more culturally inclusive curriculum, and close coordination with the police, other agencies and parents (Gaustad, 1990; Gaustad, 1991; Riley, 1991; Tursman, 1989).

The most extensive research to date on cities with chronic gang problems has shown that the strongest predictor of perceived improvement is a combination of education and job training opportunities and mobilization of interagency networking and grassroots participation in agencies serving youth (Spergel, 1990). Helping to expand opportunities by restructuring the way organizations work would seem a promising avenue.

Coordination with the Community

A stated objective under Goal Six is that parents, businesses, and community organizations will work together to make schools a "safe haven for all children." Obviously such actions may take a number of forms including those just described for reducing gang problems.

A recent review concluded that there is little evidence on the effectiveness of community-based interventions (mostly without school involvement) to prevent delinquency probably due to the difficulties of measurement and disentangling the many influences and interactions among community, family and individual level factors in behavior (Office of Technology Assessment, 1991).

There is more information on programs involving schools and the community. Two promising violence prevention programs with incomplete evaluations have such links (Cohen & Wilson-Brewer, 1991; Wilson-Brewer et al., 1991). One is an extension of the Violence Prevention Curriculum for Adolescents (Prothrow-Stith, 1987; see above) into surrounding neighborhoods via multi-service and health centers, boys and girls clubs, recreation programs and other agencies. Agency staffs use the violence prevention message in their work. Local coalitions among agencies have also been formed to promote this approach, and a media campaign aims to help youth defuse conflict situations. The City of Boston supports this project which receives many requests for training and technical assistance.

The second promising program, The Paramount Plan in California, consists of a curriculum on alternatives to gang membership for fifth and seventh graders, meetings for parents, and family counseling for teens at high risk for gang involvement. After exposure to the program most students (90%) responded negatively toward joining a gang and still held that attitude one year later.

A program to coordinate efforts of schools and law enforcement agencies called SMART (School Management and Resource Teams) has been applied in over 20 cities. It organizes the reporting and analysis of incidents on school grounds and feeds the results to local teams which plan actions to reduce selected incidents. Districtwide policies and procedures on student misbehaviors and crimes and cooperative relationships with police and other community agencies are also developed. In one school district discipline problems receiving attention declined moreso than did other problems (National Institute of Justice, 1988). The central concept of interagency cooperation was difficult to assess, however, and in an earlier three-city development phase after two years such cooperation had barely begun (Tremper, 1987). Thus, many of the common strategies to deal with school violence remain untested. Other approaches that involve coordinated efforts appear more promising, but still need to be fully evaluated.

IV. CONCLUSIONS

Drug use and school misbehavior are sometimes acts of the same students and they have many antecedents in common. Despite these similarities, each is usually handled separately and no one strategy seems best for all students or circumstances. It is unlikely that real benefits will come from limited change in single aspects of schools. Instead, simultaneous attention to curriculum and instruction, school organization and governance, and social relations in the school are needed.

Comprehensive approaches which incorporate multiple strategies and intervene in the community as well as the school seem most promising. Such approaches should address multiple risk factors and seek to provide protective conditions against these risks. Strategies will have to be adapted to local situations, and it will probably be necessary to make multi-year commitments to create and sustain change. Some of the most promising strategies are described below.

Conclusions on Disciplined Environments

The research on schools and classrooms is extensive and provides considerable guidance for development of programs in this area. Three aspects of schools contribute to a disciplined environment: a strong emphasis on the academic mission of the school; firm, fair and consistently enforced discipline standards; and an "ethic of caring" that guides staff-student relationships. A tough policy by itself appears inadequate, and a combination of these three aspects is likely to prove more useful.

The school strategies discussed above suggest that changes in curricular standards and organization, school organization, and school management can improve learning environments. Here are some examples. Since putting students in the same track for all basic subjects leads to discipline problems for student in low ability groups, its elimination would help them greatly. Smaller schools, self contained classes, and teachers assuming responsibilities beyond the classroom all seem to

contribute to the sense of caring. Most alternative schools do this too and improve student behavior markedly. Suspension is not a very successful disciplinary measure, and in-school alternatives seem to be used for less serious offenses. Principals who focus on instructional leadership and interpersonal relationships and share planning with teachers also have fewer discipline problems and students who learn more. All these school strategies should in the long run also contribute to higher graduation rates (Goal Two) since they will help engage students more fully in learning.

Research on classroom management and organization is also well developed, but only at the elementary school level. It shows that introducing rules at the beginning of the school year is essential for establishing and maintaining order, but the meaning of order varies by the task and situation and does not necessarily imply silence and rigid compliance. Loosely structured settings, challenging assignments, and even interventions to stop misbehavior pose risks of more inappropriate behavior, but can be handled by teachers with strong classroom management skills. Teachers' expectations when translated into actions also influence student achievement. Cooperative learning can improve achievement and interpersonal relations, but several common classroom discipline approaches have little evidence of being effective. Little research has been done on state or district policy effects on schools or classrooms, or the design and management of curriculum tasks that foster conceptual understanding.

Conclusions on Drugs and Schools

Some success in reducing student drug use has been demonstrated. Nonetheless, there are many specific issues that require further study before the specific components and strategies necessary to create a successful program can be prescribed.

Comprehensive programs and social influence programs, which include components designed to teach social resistance skills and correct misperceptions concerning the prevalence of drug use (i.e., alter perceptions of drug use norms) and teach generic personal and social skills or "life skills" are the

most promising approaches currently available. These aproaches have consistently produced short-term reductions in substance use. Ongoing preventive interventions are needed throughout middle/junior and senior high school. Although various program providers have been found to be capable of producing prevention effects, programs which include peer leaders sometimes have produced somewhat better results than those led by adults.

Less is known about the extent to which current prevention approaches are effective with ethnic and racial minority populations. There is, however, increasing evidence that life skills/resistance skills prevention approaches generalize relatively well to a broad range of students as long as they are implemented in a manner that is culturally sensitive and relevant.

Prevention research requires a significant investment of resources in terms of monetary support and time. Research in the field has not expanded rapidly but important studies have been published during the past five years that continue to give additional information to the field about promising directions.

Though much more research is needed, we should still recognize and appreciate the accomplishments of the past decade. For policymakers it is imperative that they (1) understand that the promising programs and strategies require skill in implementation and may require modification to fit particular circumstances, (2) commit to ongoing evaluation of their prevention efforts to determine impact on student behavior, and (3) periodically assess the state-of-the-art in drug prevention to accurately determine what is effective or promising as well as what has proven to be ineffective.

Conclusions on Violence in Schools

Ways to reduce student fights and assaults by means of violence prevention curricula and conflict resolution training have been the subject of considerable study and yield some promising if inconclusive findings. They seem to reduce fights and change attitudes toward solving problems physically. A program to coordinate efforts of schools and law enforcement agencies has shown a

drop in discipline problems in a pilot school district. On the other hand, strategies to keep weapons and intruders out of schools are quite varied and largely untested. Nor is there much research on staff training or other actions schools might take to reduce violence. And some areas such as gang activities and coordination with the community are inherently difficult to study because of their complexity. The most extensive research on gang problems suggests that a coordinated effort among schools, job training program and other agencies may be needed. The evidence from this and other sections of this report suggests that schools may do more to reduce student violence by creating nurturing learning environments than by placing primary emphasis on trying to control student behavior.

Conclusions on Design of Studies

Much of the research reviewed here was conducted using non-experimental or correlational research designs where cause and effect are hard to pin down. Stronger findings would emerge from experimental manipulations that change school environments and careful study of the effects of these changes. Assigning students, classrooms or schools randomly to changed or unchanged conditions often faces practical difficulties, but is an essential ingredient of such an approach. More longitudinal studies would also be useful to trace the long-term effects of strategies. Most studies only look at short-term impacts. Case studies of promising programs and practices using detailed interviews and observations of participants and observations of their interactions would also help in understanding the processes underlying the effects or lack of them. Little of the research cited in this report concerns such qualitative studies which are particularly useful for developing insights into the ways programs actually work.

With all strategies, there is need to assess the kinds of students served, the implementation of the programs and practices, student experiences during the program, and both short and long term

effects. Substantial funds and commitment will be needed to conduct such studies, and results will not come quickly. Only in this way will we gain greater certainty about the worth of various strategies.

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